

REMARKS

In accordance with the foregoing, claims 1-6 have been amended. Claims 7-38 have been cancelled, without prejudice or disclaimer.

Claims 1-6 are pending and under consideration.

OBJECTION TO THE TITLE:

In the Office Action, at page 4, the title was objected to as not being descriptive. In view of the proposed amended title set forth above, the outstanding objection to the title should be resolved.

CLAIM OBJECTIONS:

On page 4 of the Office Action, the claims were objected to for the reasons set forth therein. The claims have been amended to improve clarity and antecedent support. It is respectfully requested that the objection to the claims be withdrawn.

REJECTION UNDER 35 U.S.C. § 102:

In the Office Action, at page 5, claim 1 was rejected under 35 U.S.C. § 102 in view of Applicants Admitted Prior Art ("AAPA"). This rejection is traversed and reconsideration is requested.

According to AAPA, the track error signal (TES) is generated by using a push-pull signal M_d output from the main optical detector 2a. See paragraph [0008] of Specification. The track cross signal (TCS) is generated by using a difference signal $S_{1d} - S_{2d}$ of push-pull signals S_{1d} and S_{2d} output from the first and second optical sub-detectors 2b and 2c, respectively, and the push-pull signal M_d . Here, since the first and second sub-beams B_{S1} and B_{S2} are disposed $\pm 1/2$ track pitch off the main beam B_M , and therefore the push-pull signals S_{1d} and S_{2d} have phase differences of $\pm 90^\circ$ with respect to the push-pull signal M_d , the track cross signal can be detected by using the phase differences.

However, contrary to the assertions made in the Office Action, AAPA fails to teach or suggest, "a generator generating the seek direction detecting signal from a phase difference between the track cross signal and the track error signal," as recited in independent claim 1. Rather, AAPA limits its description to recognizing that the **track cross signal** can be detected by using the phase differences. Emphasis added. AAPA fails to teach or suggest detecting the phase difference between "the track cross signal and the track error signal," as recited in

independent claim 1. Rather, the phase difference of the push-pull signals S_{1d} and S_{2d} are described. Although AAPA provides that the first and second sub-beam B_{S1} and B_{S2} are disposed $\pm 1/2$ track pitch off the main beam B_M , nothing teaches or suggests generating "the seek direction detecting signal from the phase difference between the track cross signal and the track error signal," as recited in independent claim 1.

In view of the foregoing, it is respectfully requested that independent claim 1 and related dependent claims be allowed.

REJECTION UNDER 35 U.S.C. § 103:

In the Office Action, at page 6, claims 2-6 were rejected under 35 U.S.C. § 103 in view of AAPA and U.S. Patent No. 6,147,952 to Watabe ("Watabe"). The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

Because dependent claims 2-6 depend from independent claim 1, the cited references, individually or combined, must teach all the claimed features of independent claim 1. The description provided above of AAPA and the arguments presented supporting the patentability of independent claim 1 in view of AAPA are incorporated herein.

Referring to Watabe, this reference provides an optical disk apparatus capable of reproducing information from an optical disk 10. Similarly to AAPA, Watabe generally shows in FIGS. 4A-4C, for instance, a signal from the right side of two light-receiving segments relative to a direction of beam spot advancement is named "SR", and a signal from a left side of the two light-receiving segments or regions is named "SL". See column 6, lines 49-60 of Watabe. The signals SL and SR are in phase, as shown in FIG. 4B; that is, the signals SL and SR reach their minimum values at an intermediate point (A) in the direction of the prepit axis and reach their maximum values at an intermediate point (B) adjacent thereto. It can be estimated easily from FIG. 4B that the amplitude of the difference between the signals SL and SR will be smaller than the sum thereof.

However, Watabe is silent as to teaching or suggesting, "a generator generating the seek direction detecting signal from a phase difference between the track cross signal and the track error signal," as recited in independent claim 1. Rather than determining a seek direction detecting signal and rather than determining the phase difference between a track cross signal and a track error signal, Watabe limits its description by describing the relationship between SR and SL; for instance, where a difference signal will be larger in amplitude than the sum signal in

the case when the signals SR and SL are in inverse phase, that is, where one of them reaches its maximum value when the other reaches its minimum value. Thus, even if AAPA and Watabe were combined, the combination thereof would be silent in teaching or suggesting all the claimed features of independent claim 1.

In view of the foregoing, it is respectfully requested that independent claim 1 and related dependent claims be allowed.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance, which action is earnestly solicited.


If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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